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BIOLOGICAL AND MICROSCOPICAL DEPARTMENT

OF THE

ACADEMY OF NATURAL SCIENCES.

Jan. 3d, 1870.

Director S. W. MITCHELL, M.D., in the Chair.

Eighteen members present.

DR. MCQUILLEN exhibited the skull of a hedge-hog, in which, owing to fracture of the left lower incisor, the superior incisor of that side, failing to meet with its antagonist, had formed a complete circle, the apex of the tooth penetrating the right upper maxilla just in front of the molars. The right upper incisor also had been fractured, and the inferior incisor of that side had grown to more than twice the usual length, and assumed the form of a tusk. The skull of a squirrel was also shown, in which, owing to a similar accident, the superior incisors had formed a complete circle and penetrated the upper maxilla.

Jan. 17th.

Director S. W. MITCHELL, M.D., in the Chair.

Fourteen members present.

DR. MCQUILLEN exhibited the pulp of a lower molar, with the vessels naturally injected. The principal points of interest connected with the specimen were the dentinal fibrilli, which were quite evident under the microscope, projecting from a fragment of dentine. In commenting on the specimen, the speaker stated that these fibrilli, which are located in the dentinal tubuli, were first observed some eight or ten years ago in the human teeth by John Tomes, F.R.S., of London, who regards them as the continuation of the nerves of the dental pulp, and accounts for the exquisite sensibility of the dentine in excavating decay from the cavity of a tooth, by impressions made upon these filaments. The speaker would not pretend to assert that this was an untenable position, but he inclined to the opinion that the dentinal fibrilli are to be regarded as post mortem results occurring after the extraction of a tooth, and due to the coagulation of the fibrine of the liquor sanguinis circulating in the dentinal tubuli during life. In the removal of pulps from the teeth when devitalized by arsenical application, or breaking up a tooth after extraction, he had found no difficulty in separating the pulp from the dentine, which would hardly be possible if the nerve fibres passed into the millions of tubuli in the dentine; or under such circumstances an attachment would be formed exceedingly difficult of separation.

A large plaster model of an incisor tooth, with a vertical section showing the arrangement of the enamel, cementum, dentine, pulp cavity and pulp, was used in illustration of the remarks.